



BOX AMENDMENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

9-25-01

11/A

Applicant: R.L. Worthington & Stephen J. Brown  
Serial No.: 09/163,807  
Filing Date: September 30, 1998  
Title: DIABETES MANAGEMENT SYSTEM AND METHOD FOR CONTROLLING BLOOD GLUCOSE

Attorney Docket No. HERO-1-1053  
(Formerly RYA-118/CIP/CON)  
Group Art Unit: 3736  
Examiner: Astorino, M.

AMENDMENT UNDER 37 C.F.R. 1.111

TO THE COMMISSIONER FOR PATENTS

Sir:

In the Claims:

Please cancel Claims 1-50

Please add Claims 51-100 as follows:

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51. An apparatus for assisting a patient having diabetes mellitus in controlling blood glucose, said apparatus comprising:

- a) an input means for entering a blood glucose value  $G(t_d)$  representative of a blood glucose concentration of the patient at time  $t_d$  and for entering an insulin dose value  $I_k$  representative of an insulin dose administered to the patient prior to time  $t_d$ ;
- b) a memory means for storing an insulin sensitivity value representative of an insulin sensitivity of the patient and for storing information for determining an insulin action value  $F_k(2_d)$  representative of a fraction of insulin action remaining at time  $t_d$  from said insulin dose;
- c) a processor connected to said input means and said memory means for determining said insulin action value  $F_k(t_d)$  and for determining a future blood glucose value  $G(t_j)$  representative of an expected blood glucose concentration of the patient at time  $t_j$ , wherein said processor determines said future blood glucose value  $G(t_j)$  in dependence upon said blood glucose value  $G(t_d)$ , said insulin dose value  $I_k$ , said insulin sensitivity value, and said insulin action value  $F_k(t_d)$ ;